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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,836	03/03/2004	Mitsuru Tanabe	60188-789	2502

7590 05/16/2006

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EXAMINER
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VUONG, QUOCHIE B

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/790,836	Applicant(s) TANABE ET AL.	
	Examiner Quochien B. Vuong	Art Unit 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 13 is/are rejected.
- 7) ☐ Claim(s) 3-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/03/04, 12/01/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on 03/03/2004 and 12/01/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

### ***Claim Objections***

3. Claims 8-12 are objected to because of the following informalities: claim 8 ends with a “;” instead of “.”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Camp et al. (WO 00/30250).

Regarding claim 1, Camp et al. disclose a transmission circuit (figure 4) comprising: modulated signal generating means (waveform generator 14) for generating a modulated signal including a phase component and an amplitude component; a modulated signal line for transmitting the modulated signal, the modulated signal line being connected to the modulated signal generating means; modulated signal detecting means (magnitude function 22) for detecting at least the amplitude component of the modulated signal generated by the modulated signal generating means, the modulated signal detecting means being connected to the modulated signal line; an amplitude component line for transmitting the amplitude component of the modulated signal, the amplitude component line being connected to the modulated signal detecting means; threshold value inputting means for inputting a threshold value ( $A_T$ ) for switching a method for modulating the modulated signal; and judging means (360) for judging whether or not an amplitude value of the amplitude component of the modulated signal is larger than the threshold value input from the threshold value inputting means, the judging means being connected to the amplitude component line (page 7, line 17 – page 9, line 2).

Regarding claim 2, Camp et al. disclose wherein the threshold value is set at a value corresponding to a boundary between a region in which a signal to be transmitted exhibits a linear response and a region in which the signal exhibits a nonlinear response (page 8, lines 3-11).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Camp et al.

Regarding claim 13, Camp et al. disclose the transmission circuit of claim 1 above. In addition, if not inherent it would be obvious for the threshold value inputting means of Camp et al. to be storage means for storing the threshold value, and the judging means performs the judgment using the threshold value stored in the storage means in order to store and provide the threshold value for comparison.

***Allowable Subject Matter***

9. Claims 3-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, Camp et al. disclose the transmission circuit of claim 1 above. However, Camp et al. fail to teach or fairly suggest further wherein the modulated signal detecting means also detects the phase component of the modulated signal, and the transmission circuit further comprises: a phase component line for transmitting the phase component of the modulated signal, the phase component line being connected to the modulated signal detecting means; a constant-voltage supply line for supplying a constant voltage; first selection outputting means for outputting the modulated signal if the amplitude value of the amplitude component is smaller than or equal to the threshold value, while outputting the phase component if the amplitude value of the amplitude component is larger than the threshold value, based on a judgment result of the judging means, the first selection outputting means being connected to the modulated signal line and the phase component line; and second selection outputting means for outputting the constant voltage if the amplitude value of the amplitude component is smaller than or equal to the threshold value, while outputting the amplitude component if the amplitude value of the amplitude component is larger than the threshold value, based on the judgment result of the judging means, the second selection outputting means being connected to the amplitude component line and the constant-voltage supply line.

Regarding claim 8, Camp et al. disclose the transmission circuit of claim 1 above. However, Camp et al. fail to teach or fairly suggest the transmission circuit further comprising: a constant-voltage supply line for supplying a constant voltage; and selection outputting means for outputting the constant voltage if the amplitude value of the amplitude component is smaller than or equal to the threshold value, while outputting the amplitude component if the amplitude value of the amplitude component is larger than the threshold value, based on a judgment result of the judging means, the selection outputting means being connected to the amplitude component line and the constant-voltage supply line.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Elliott (US 3,662,290) discloses automatic control for amplitude-modulated signal source.

Watanabe (US 4,592,073) discloses burst signal transmission system.

Isota et al. (US 5,093,637) disclose modulation device with input signal modification for correction of amplifier nonlinearities

Walcrak et al. (US 5,193,223) disclose power control circuitry for a TDMA radio frequency transmitter.

Wilson (US 7,010,280) discloses linear RF power amplifier and transmitter.


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quochien B. Vuong  
May 14, 2006.

  
QUOCHIE B. VUONG  
PRIMARY EXAMINER